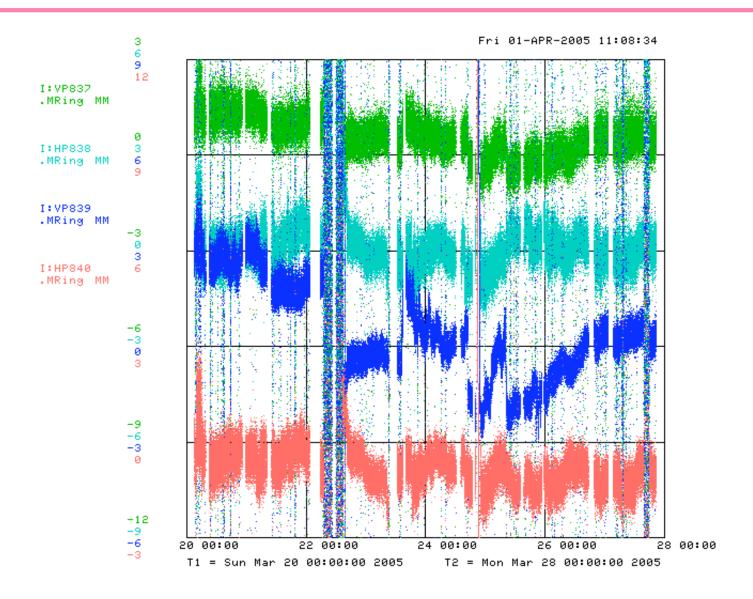
Orbit variations in MI8 line March 14, 2005

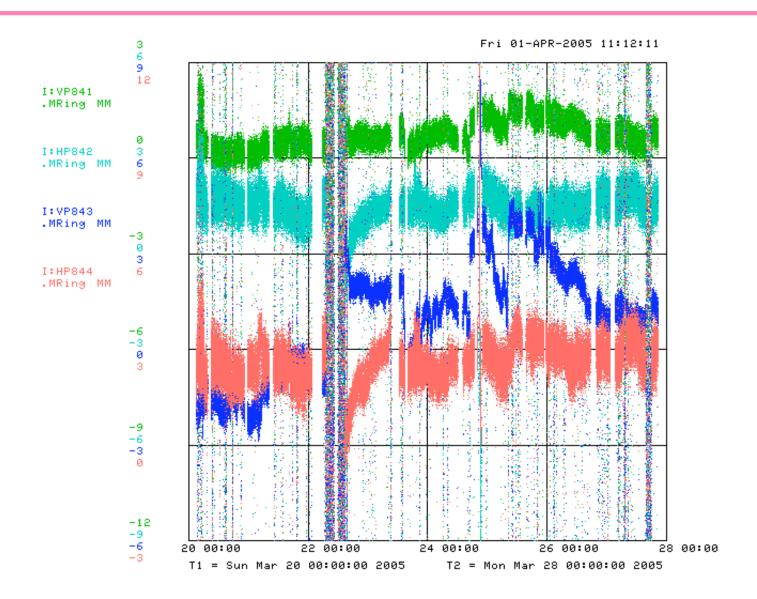
Ming-Jen Yang

Main Injector Dept.

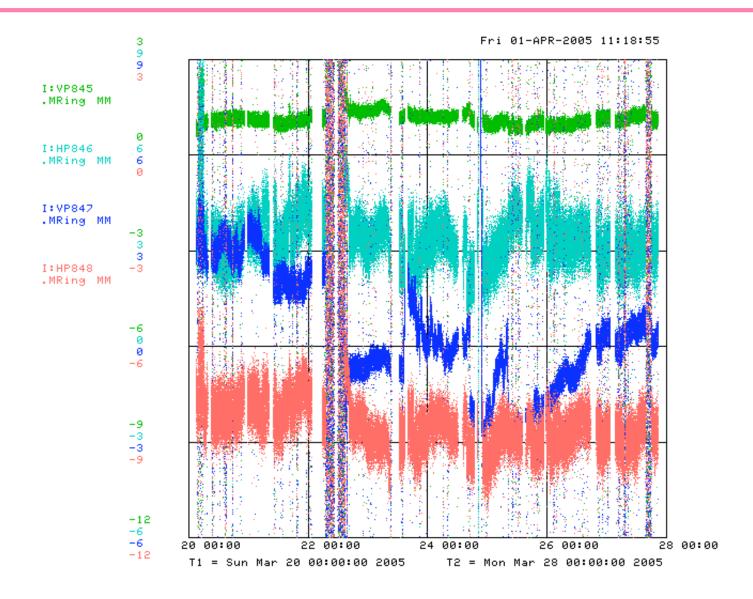
Positions at VP837, HP838, VP839, & HP840 from Lumberjack



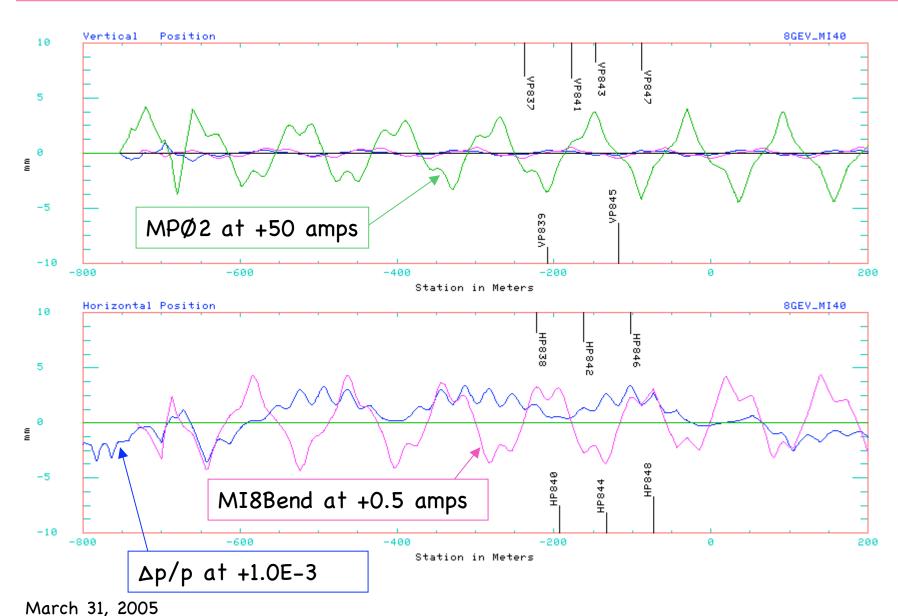
Positions at VP841, HP842, VP843 & HP844 from Lumberjack



Positions at VP845, HP846, VP847, & HP848 from Lumberjack



Effects of known sources of orbit error



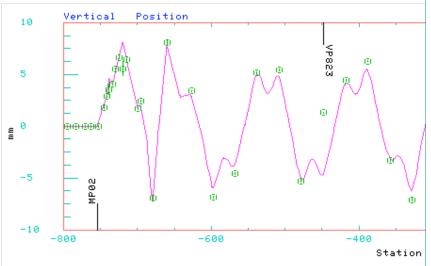
Stability with septum magnet MPØ2

- >MPØ2 setting not changed
- >Orbit difference:

4/12/04 - 4/06/04

> Calculation:

+90 amps on MPØ2

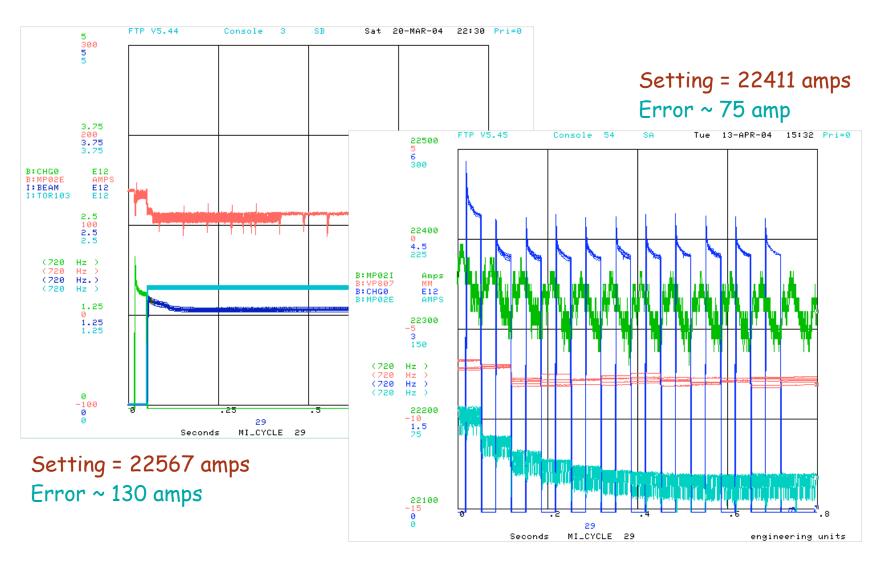


```
PB:163 8 GEV LINE PARAMS<NoSets>
-<FTP>+ *SA* X-A/D X=TIME
                        Y=I:VP823 ,I:HP824 ,I:IBEAMM,I:TOR103
                                       , 0
                                ,-10
COMMAND ---- Eng-U I= 0
                        I=-10
-< 1>+ s_MI AUTO F= 2
                        F= 10
-B:MP02T
          MP02 PS Peak Current
                                        22334 Amps .
                                      * 9718 / .1A
          MAXIMUM MAGNET AMPS
           NEW MAGNET INSTALLATION
-B:VBC1 *.01 Vert Bend #1 PS MI-8
                                        818.4 AMPS
          H8021, V8022, V8023, H8031.
                                   31 -20 /31 -20 31 -20
-B:MI8BD *.001MI8BND RAMP CARD NAME 1799.3927
                                      798.67188 AMPS ...
                        GxPB 2: Storage Scope Emulation
                     File Directory
                10-Apr-04 0600 Sat save after tune
            223 05-Apr-04 2013 Mon correctors only
                  05-Apr-04 1552 Mon RAD save single crate $30
                 04-Apr-04 1525 Sun $14=4.3e12, miniboone=3e16@10T
            224 31-Mar-04 1315 Wed Sequencer Save - 400MeV Din. (ver)
                 31-Mar-04 1314 Wed Sequencer Save - 400MeV Dip. (hor)
            220 31-Mar-04 1312 Wed Sequencer Save - 400MeV Quad Settings
            254 30-Mar-04 2223 Tue Tuning up, 4.7E12
                30-Mar-04 0041 Tue getting ready to retreat maybe
         -+ 247 29-Mar-04 1236 Mon prior to restore of horizontals
            228 28-Mar-04 1039 Sun running ok after tuning.
                            Utilities CNS54
    Utilities
                                          *COPIES*
                                                        ◆Pgm_Tools◆

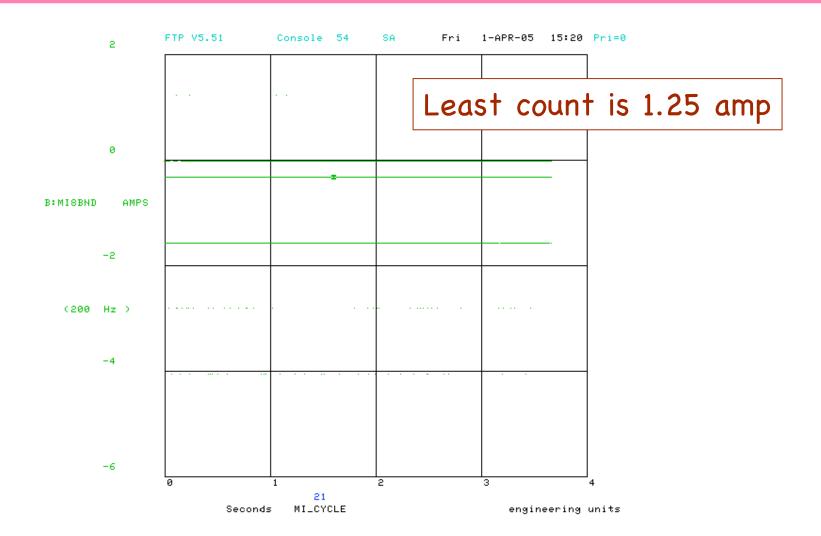
    Logger/Save-Restore/SDA Redirection

                                                                     2e12
      Redirect
                  +Set+
      >Use SR File -< 246>+
                                        ◆Directoru◆
 *Pr
      Use SDA Usage
                       -<ColliderShot >+
 *Sa
      Use SDA File
                                        ◆Directoru◆
      Use SDA Case -<Inject Protons
      Use SDA Subcase -< 1>+
      Use Logger Node
                                    ◆CBSDA (DUE25 ◆
                               ◆08-FEB-2004 08:22◆
      Use Logger Time
                                   +3600 + (Sec )
     Error initializing SDA file field CBS_INVARG
```

MPØ2 error signal



MISBEND read-back resolution



Summary

- Vertical position variation
 - Consistent with MPØ2 not steady.
- · Horizontal palne
 - MI8 bend
 - ✓ Read-back precision is too coarse.
 - Cycle to cycle momentum variation